

System & Installation Specifications

Compact, Combination RO+DI Systems



Models:

**RODI-C-12A, RODI-C-12AU, RODI-C-12AL,
RODI-C-12B, RODI-C-12BU, RODI-C-12BL**

- ❑ The system shall be listed in the US & certified in Canada by CSA International, and bear the CSA Mark as shown below. Systems for export that require the 'CE' mark shall meet the requirements for CE marking as shown below.
- ❑ The RO shall remove 94-99% of the dissolved inorganic ions, and up to 99% of the dissolved organics, suspended solids and microorganisms found in ordinary tap water. The Type I water produced shall meet ASTM, CAP, CLSI, and USP 29 specifications for Type I reagent grade water and, depending on the model, contain <5 PPB of TOC, be *pyrogen/endotoxin free*, and have no DNase/RNase activity.
- ❑ The system shall produce RO purified water at a rate of 10 or 20 Liters/hour (upgrade dependent), and 2-Liters/min for the Type I DI portion of the system.
- ❑ The system shall operate on 12 VDC internal power supplied by a 100-240 VAC, 50/60 Hz power supply.
- ❑ The RO portion of the system shall operate automatically to fill the RO storage tank, and automatically shut off when the RO tank is full and/or in the event of low incoming water pressure.
- ❑ The RO portion of the system shall include a 10" 1-micron high performance activated carbon & sediment prefilter cartridge and a high performance TFC (thin film composite) reverse osmosis membrane.
- ❑ The RO portion of the system shall not require periodic backflushing, fast forward flushing, or cleaning cycles.
- ❑ The system shall include a pressurized 30-Liter (15.5" dia. x 20" tall) or 42-Liter (15.5" dia. x 25" tall) RO storage tank with a pressure switch that automatically shuts the system down when the tank is full, and turns the system back on as water is removed from the tank.
- ❑ The system shall include a built-in digital, temperature-compensated, resistivity, conductivity, and temperature monitor with programmable setpoints to monitor Type I water quality. The monitor shall meet USP 29 specifications. The system shall also include a hand-held portable digital conductivity meter to monitor RO water quality.
- ❑ The RO portion of the system shall include product and reject flow meters to monitor and control flow rates.
- ❑ The Type I system's total ion exchange capacity shall be 2,000 grains as CaCO₃.
- ❑ The system shall include a 12 VDC virtually silent pump that continuously recirculates Type I water within the system, to maintain the best water quality at all times and eliminate the need to manually turn the system on prior to use.
- ❑ The system shall include a remote dispenser with a 0.2 micron absolute sterilizing final filter capsule, manufactured per GMP standards from USP Class VI materials with no glues or surfactants.
- ❑ The system's overall dimensions for the cabinet shall be approximately 20" wide by 20" high by 12" deep.
- ❑ The system cabinet shall be bench, shelf, or wall-mountable at no extra charge.
- ❑ The system price shall include a 2-year warranty in the USA and Canada, and a 1 year warranty elsewhere.
- ❑ The system shall be manufactured in U.S.A.

See other side for installation and start-up information.

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Installation and Start-up of AQUA SOLUTIONS' RO+DI Systems

As shipped, **AQUA SOLUTIONS** Compact Combination Reverse Osmosis plus Type I DI (RO+DI) Water Purification Systems can be bench, shelf or wall-mounted at no extra charge. While bench mounting affords more flexibility, shelf or wall mounting can get the system up and out of the way, conserving bench space for other uses. Regardless of the initial mounting method, it can be changed at any time. Complete, detailed mounting instructions are included in the Operating Manual.

The system requires a source of incoming feed water at 10-100 PSIG from a user-supplied shutoff valve located within 15' of the LEFT SIDE of the system, plus 2 grounded 100-240 VAC, 50/60 Hz electrical outlets within 5' of the right side of the system. Electrical consumption is less than 3 amps total. The system also requires a drain or sink within 15' of the system.

Note that the operating weight of the system can approach 100 pounds. If shelf-mounting, make sure the shelf can support this weight. If wall-mounting, make sure the wall can support this weight. In the case of wallboard attached to metal studs, attach a piece of 3/4" plywood directly to the studs first, and attach the system to the plywood. When wall-mounting, use 4 "industrial strength" 1/4" lag bolts, 1/4 " toggle bolts, or 1/4" masonry anchor bolts to attach the cabinet to the wall.

Except for the user-supplied inlet valve, all items required for installation are included with the system. More detailed instructions are included in the Operating Manual supplied with the system. The system cabinet measures approximately 20" wide by 20" tall by 12" deep. The storage tank is external to the cabinet. After mounting the system cabinet, proceed as follows:

- a. Install a 1/4", 3/8", or 1/2" NPT female shut off valve on an appropriate water supply line. If the shut off valve is 1/2" NPT, reduce it down to 1/4" or 3/8" NPT female. Make sure valve is closed. Install a 1/4" or 3/8" NPT male by 1/4" tube fitting (both supplied with system) on shut off valve, using Teflon tape on threads.
- b. Install 1/4" OD black polyethylene tubing (20' supplied with system - cut to required length) from 1/4" push-in type water inlet fitting marked "Water Inlet", located on bottom left side of system cabinet, to the fitting on valved water source. Do not open valved water source at this time.
- c. Screw the RO tank valve assembly, onto the tank outlet using Teflon tape on the threaded fitting. Locate the tank inside the sink cabinet, on the floor, or on a sturdy shelf within 15' of the system cabinet.
- d. Install 1/4" OD red polyethylene tubing (20' supplied with system - cut to required length) from 1/4" push-in type RO reject outlet fitting #2 located on right side of system cabinet, to a suitable drain or sink. Note that RO reject water will flow out of this tubing at 8-12 gallons per hour whenever the RO System is running. Do not connect multiple drain lines together.
- e. Install 1/4" OD red tubing (20' supplied with system - cut to required length) from the RO storage tank drain outlet fitting #3 located on right side of system cabinet, to a suitable drain or sink. Note that water will flow out of this tubing at 1-2 gallons per minute when draining the storage tank. Do not connect multiple drain lines together.
- f. Install 3/8" OD blue polyethylene tubing (20' supplied with system - cut to required length) from 3/8" push-in type RO purified water outlet fitting #1 located on right side of system cabinet, to the 3/8" push-in type RO inlet fitting on the storage tank.
- g. Install the remote dispenser by attaching the push-in connectors(s) to 1/4" push-in type outlet fitting(s) marked "Remote Dispenser", located on upper right side of system cabinet. The assembly includes a stainless steel hook with mounting screws. The top ring can be used to conveniently hang the dispenser on the stainless steel hook, when not in use. Install the stainless steel hook in a convenient location on the right side of the system cabinet using the 2 screws provided with the hook.
- h. Open cabinet door and make sure water inlet valve (located on black water inlet tubing on left bottom inside the cabinet) is closed and ALL pressure gauges on the system read zero. Note that the valve is closed when the handle is perpendicular to the direction of flow, and open when parallel to it.
- i. Install the ten inch activated carbon prefilter cartridge in the clear filter bowl, making sure the black gaskets are in place. Attach the filter bowl to the housing located inside the system cabinet, making sure the O-ring on the bowl is in place, and hand-tighten firmly.
- j. Install the DI module and UV lamp (if so equipped) in the system at this time. Note that the RO Cartridge was installed in the system during testing.
- k. Plug the DC power supply into the shiny metal 12 VDC inlet connector on the lower right side of the cabinet. Connect the power cords for the UV and 12V power supply. Do not plug the system's power cords into their 100-240 VAC receptacles at this time.
- L. Inspect work done, making sure that system water inlet valve is CLOSED and the system's ELECTRICAL CORDS ARE NOT PLUGGED IN.
- m. Follow detailed start-up instructions in the Operating Manual.
- n. Call **AQUA SOLUTIONS** at 706-692-9200 or 800-458-2021 with any technical questions or comments.

